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10/627,027	07/25/2003	Joseph L. Del Callar	ORCL-2003-030-01	3666

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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/627,027	DEL CALLAR ET AL.	
	Examiner	Art Unit	
	Kevin Poe	3609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to applicant's communication of July 25, 2003. Original claims 1-27 are pending and have been examined. The rejections are stated below.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-3, 5, 12-14, 16-18, 20** and **27** are rejected under 35 U.S.C. 102(e) as being anticipated by **Rahn et al. [US Pub No. 2004/0054685 A1].**

4. Regarding **claim 1,** Rahn et al. discloses a computer implemented method for matching a remittance to a transaction [see page 5, paragraph 0064].

Rahn et al. discloses accessing remittance lines, transaction information, and matching rules that assign a weight to a parameter considered in said matching [see page 37, claim 1].

Rahn et al. discloses computing a weighted matching score corresponding to said parameter based upon said weight wherein said matching score corresponds to a probability of an accurate match between said remittance and said transaction [see page 13, paragraph 158].

Rahn et al. discloses generating a match recommendation based on said weighted matching score. [see page 13, paragraph 158]

5. Regarding **claim 2**, the limitation of claim 1 is covered above. Rahn et al. discloses determining that said weighted matching score is below a minimum scoring threshold; and comparing said remittance against a plurality of electronic invoices. [see page 13, paragraph 158]

6. As per **claim 3**, the limitation of claim 2 is covered above. Rahn et al. teaches wherein said comparing comprises associating a sum of said plurality of electronic invoices closely to an amount corresponding to said remittance. [see page 13, paragraph 158]

7. As per **claim 5**, the limitation of claim 1 is covered above. Rahn et al. teaches wherein said remittance lines comprise a lockbox file. [see page 8, paragraph 0092]

8. In regards to **claim 12**, the limitation of claim 1 is covered above. Rahn et al. teaches sending said match recommendation to a receipt application program interface. [see page 13, paragraph 154]

Rahn et al. teaches assigning an informative header to a remittance for use by a receipt application, [see page 13, paragraph 152]

Rahn et al. teaches where said match recommendation comprises an unmatched remittance, sending said match recommendation to an unmatched remittance notification initiator. [see page 13, paragraphs 156 and 157]

Rahn et al. teaches initiating a workflow notification corresponding to said unmatched remittance. [see page 13, paragraphs 156 and 157]

9. Regarding **claim 13**, Rahn et al. teaches a matching program accessing remittance lines of said remittance, transaction information, and matching rules wherein said matching rules assign a weight to a parameter considered in said matching program [see page 2, paragraph 0034] for computing weighted match score corresponding to said parameter based upon said weight and wherein said matching score corresponds to a probability of an accurate match between said remittance and said transaction and for generating a match recommendation based on said weighted matching score. [see page 13, paragraph 0158]

Rahn et al. discloses a graphical user interface operating with said matching program and comprising an interactive display for allowing a user input, said graphical user interface for generating a said matching rules. [see page 2, paragraph 0038]

Rahn et al. discloses a data staging program operating with said matching program for accessing a database, extracting relevant transaction information therefrom, staging said relevant transaction information for use by said matching program, and providing said relevant transaction information thereto; and a post match handler for handling said match recommendation. [see page 13, paragraph 0158]

10. Regarding **claim 14**, the limitation of claim 13 is covered above. Rahn et al. teaches a receipt application program interface operating with said post match handler for providing said match recommendation to a receipt application [see page 13, paragraph 0154].

Rahn et al. teaches a notification initiator operating with said post match handler for initiating a notification wherein said notification comprises a report that a match failed between said remittance and said transaction. [see page 13, paragraph 0152]

11. As per **claim 16,** the limitation of this claim recites similar language as claim 1 and is rejected on the same grounds.

12. As per **claim 17**, the limitation of claim 16 is covered above. Claim 17 recites similar language as to claim 2 and is rejected on the same grounds.

13. As per **claim 18,** the limitation of claim 17 is covered above. Claim 17 recites similar language as to claim 3 and is rejected on the same grounds.

14. As per **claim 20**, the limitation of claim 16 is covered above. Claim 20 recites similar language as to claim 5 and is rejected on the same grounds.

15. As per **claim 27**, the limitation of claim 16 is covered above. Rahn et al. discloses a computer usable medium wherein said method further comprises handling said recommendations. [see page 13, paragraph, 0154]

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. **Claims 4** and **19** rejected under 35 U.S.C. 103(a) as being unpatentable over **Rahn et al. [US Pub No. 2004/0054685 A1]** n view of **[Koller et al. US Pub No. 2002/0103793 A1.]**

18. Regarding **claim 4**, the limitation of claim 3 is covered above. Rahn et al. does not disclose wherein said associating is performed by a process comprising a Knapsack heuristic. However Koller et al. teaches the first approach is based on an analogy between this problem and the weighted knapsack heuristic: We have a set of items,

each with a value and a volume, and a knapsack with a fixed volume. Our goal is to select the largest value set of items that fits in the knapsack. Our goal here is very similar: every edge that we introduce into the model has some value in terms of score and some cost in terms of space. A standard heuristic for the knapsack heuristic is to greedily add the item into the knapsack that has, not the maximum value, but the largest value to volume ratio. [see page 21, paragraph 0353]

At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Koller et al. to obtain invention as specified in claim 4. The motivation to combine the teachings is choosing possible essentials that can fit into a weight.

19. As per **claim 19**, it recites similar language as to claim 4 and is rejected on the same grounds.

20. **Claims 6, 9, 15, 21 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rahn et al. [US Pub No. 2004/0054685 A1]** in view of **Anglum [US Pub No. 2003/0065595 A1]**, and further in view of **Templeton et al. [US Patent No. 5,679,940]** and **Harper [US Pub No. 2003/0212654 A1.]**

21. Regarding **claim 6**, the limitation of claim 1 is covered above. Rahn et al. does not disclose calculating a weighted customer score. However Anglum teaches

In addition, the present invention might look at the confidence quality of each name in the list of potential matches 38. For instance, the name on the credit card might be "Richard M. Nixon." Two individuals with similar names might reside within the trade zone of the store in which the purchase is made, specifically an individual known only as "Dick Nixon" and another individual who goes by the full name "Richard M. Nixon." In this circumstance, the confidence of the second name on the list would be higher than the first. As a result, the second name would score higher on the match quality test [see page 4, paragraph 0041]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Anglum to obtain invention as specified in claim 6. The motivation would be to understand the desires and trends of its customers.

Rahn et al. does not disclose calculating a weighted transaction score. However Templeton et al. teaches the host computer calculates a transaction score by accumulating the scoring totals associated with each date element [see column 28, lines 22-24]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Templeton et al. to obtain invention as specified in claim 6. The motivation to combine the teachings would be to for risk assessment in a transaction.

Rahn et al. does not disclose determining a total weighted matching score based on said weighted customer score and said weighted transaction score. However Harper et al. discloses deterministic data correlation determines whether an exact match has occurred and heuristic data correlation generates a set of records that possibly match

(candidate records) from the Customer Index Database 14, and then determines a match score for the candidate records. In heuristic correlation, the match scores for the candidate records are compared within the process flow to determine the best match of the candidate set [see page 5, paragraph 0071. At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Harper et al. to obtain invention as specified in claim 6. The motivation to combine the teachings would be to collect and store customer information.

22. In regards to **claim 9**, the limitation of claim 6 is covered above. Rahn et al. does not disclose calculating a weighted transaction number score; calculating a weighted transaction amount score; and determining said weighted transaction score based on said weighted transaction number score and said weighted transaction amount score. However Templeton et al. teaches the host computer calculates a transaction score by accumulating the scoring totals associated with each date element. The authorization host computer then determines whether the transaction score is equal to or greater than a predetermined level that is determined by the merchant's scoring model. [see column 28, lines 22-27]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teaches of Templeton et al. to obtain invention as specified in claim 6. The motivation to combine the teachings would be to for risk assessment in a transaction.

23. As per **claim 15**, the limitation of claim 13 is covered above. Claim 15 recites similar language as to claim 6 and is rejected on the same grounds.

24. As per **claim 21**, the limitation of claim 16 is covered above. Claim 21 recites similar language as to claim 6 and is rejected on the same grounds.

25. As per **claim 24**, the limitation of claim 21 is covered above. Claim 24 recites similar language as to claim 9 and is rejected on the same grounds.

26. **Claims 7** and **8** rejected under 35 U.S.C. 103(a) as being unpatentable over **Rahn et al. US Pub No. 2004/0054685 A1** in view of **Kilpatrick et al. [US Patent No. 6,742,124 B1].**

27. Regarding **claim 7**, the limitation of claim 1 is covered above. Rahn et al discloses it should be noted, that because the deposit data includes only the amount of the check deposit, the deposit ID, and the payor's bank routing and account number, the PAR system database 13 is required to first associate a Remittance Name and RA Provider with the routing and account number in order to subsequently identify and match the same name on an RA report [see page 13, paragraph 0154]. Rahn et al. does not explicitly disclose determining a total match score comprises scoring strings and numbers. However Kilpatrick et al. teaches consider an example comparison of the

strings "zabc" and "abcd." In this example, the hamming distance calculation would yield a value of four because the two strings differ at each of the four character positions [see column 9, lines 31-35]

At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Kilpatrick to obtain invention as specified in claim 7. The motivation to combine the teachings is Levenshtein distances provide a smoother, more graduated distance metric. [see column 9, line 30-31]

28. Regarding **claim 8,** the limitation of claim 7 is covered above. Rahn et al. does not disclose wherein said scoring strings and numbers is performed by a process comprising a Levenshtein and Longest common substring fuzzy scoring heuristic. However Kilpatrick et al. teaches the levenshtein distance calculation counts the differences between two strings, where differences are counted not only when strings have different characters, but also when one string has a character whereas the other string does not. In this manner, the levenshtein distance is defined for strings of arbitrary length [see column 9, lines 44-50].

At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Kilpatrick to obtain invention as specified in claim 8. The motivation to combine the teachings is Levenshtein distances provide a smoother, more graduated distance metric. [see column 9, line 30-31]

29. **Claims 10** and **25** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rahn et al. [US Pub No. 2004/0054685 A1]** in view of **Anglum [US Pub No. 2003/0065595 A1]**, **Templeton et al. [US Patent No. 5,679,940]**, Harper[**US Pub No. 2003/0212654 A1]** and further in view of **Hey et al. [US Pub No. 2004/0208907 A1]**, **Shurling et al. [US Patent No. 6,424,951 B1]**, and **Falcone et al.** [**US Pub No. 2002/0194096** A1].

30. As per **claim 10**, the limitation of claim 6 is covered above. Rahn et al. does not disclose calculating a weighted customer name score. However Anglum teaches In addition, the present invention might look at the confidence quality of each name in the list of potential matches 38. For instance, the name on the credit card might be "Richard M. Nixon." Two individuals with similar names might reside within the trade zone of the store in which the purchase is made, specifically an individual known only as "Dick Nixon" and another individual who goes by the full name "Richard M. Nixon." In this circumstance, the confidence of the second name on the list would be higher than the first. As a result, the second name would score higher on the match quality test [see page 4, paragraph 0041]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Anglum to obtain invention as specified in claim 6. The motivation would be to understand the desires and trends of its customers.

Calculating a weighted customer identity score is not explicitly disclosed. However Hey et al. teaches means for calculating identity scores [see page 10, paragraph 151]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Hey et al. to obtain invention specified in claim 10. The motivation would be obtaining identity.

Calculating a weighted bank score is not explicitly disclosed. However Shurling et al. teaches the Relationship scoring and Incentive Reward awarding process advantageously implements a technique for scoring Relationships that a customer has with a Bank [see column 17, line 39-41]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Shurling et al. to obtain invention specified in claim 10. The motivation would be for an implementation of a customer incentive program.

Determining said weighted customer score based on said weighted customer name score, said weighted customer identity score, and said weighted bank score is not explicitly disclosed by Rahn et al. However Falcone et al. teaches calculating a customer score using at least one of said customer information. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Falcone et al. to obtain invention specified in claim 10. The motivation to combine the teaching would be for optimizing profitability and revenue recovery for businesses.

31. As per **claim 25**, the limitation of claim 21 is covered above. Claim 25 recites similar language as to claim 10 and is rejected on the same grounds.

32. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Rahn et al. US Pub No. 2004/0054685 A1** in view of **Anglum [US Pub No. 2003/0065595 A1], Templeton et al. [US Patent No. 5,679,940], Harper [US Pub No. 2003/0212654 A1],** Hey et al. [US **Pub No. 2004/0208907** A1], **Shurling et al. [US Patent No. 6,424,951 B1], Falcone et al, [US Pub No. 2002/0194096 A1]**, and further in view of **Cuthbertson et al. [US Patent No. 5,724,597 A].**

33. As per **claim 11**, the limitation of claim 10 is covered above. Rahn et al. does not disclose calculating a weighted customer string score; calculating a weighted customer acronym score; and determining said weighted customer name score based on said weighted customer string score and said weighted customer acronym score. However Cuthbertson et al. teaches a method and system for matching textual strings representing customer names/addresses is disclosed. The textual strings are first transformed by a plurality of predefined filters. The transformed textual strings are then compared utilizing a plurality of predefined comparators to determine if the two transformed textual strings match. A score is determined based on the comparison of the two transformed textual strings utilizing a scoring procedure. Based on the score and a matching procedure, it is determined whether or not the textual strings match.

At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Rahn et al. to include the teachings of Cuthbertson et al. to obtain invention as specified in claim 11. The motivation to combine the teachings is determining if two textual strings match.

34. As per **claim 26**, the limitation of claim 25 is covered above. Claim 26 recites similar language as claim 11 and is rejected on the same grounds.

35. **Claims 22 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rahn et al. [US Pub No. 2004/0054685 A1]** in view of **Anglum [US Pub No. 2003/0065595 A1]**, **Templeton et al. [US Patent No. 5,679,940]**, **Harper [US Pub No. 2003/0212654 A1]** and further in view of **Kilpatrick et al. [US Patent No. 6,742,124 B1]**.

36. Regarding **claim 22**, the limitation of claim 21 is covered above. Claim 22 recites similar language as to claim 7 and is rejected on the same grounds.

37. As per **claim 23**, the limitation of claim 22 is covered above. Claim 23 recites similar language as to claim 8 and is rejected on the same grounds.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Poe whose telephone number is 571-272-9789. The examiner can normally be reached on Monday through Thursday 8:30am - 5:00pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm Ullah can be reached on 571-272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

kp

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SUPERVISORY PATENT EXAMINER